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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/705,641 | 11/10/2003 | Knut Magne Risvik | 5598/74US | 4785 |

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EXAMINER

ALAUBAIDI, HAYTHIM J

ART UNIT PAPER NUMBER

2168

DATE MAILED: 11/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/705,641

Applicant(s)

RISVIK ET AL.

Examiner

Haythim J. Alaubaidi

Art Unit

2168

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 15 and 16 is/are rejected.
- 7) ☒ Claim(s) 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is a first office action in regard to Application No. 10/705,641 filed on November 10, 2003.
2. Claims 1-16 are presented for examination.
3. Claims 1-11, 13 and 15-16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Avadhanam in view of De La Huerga.
4. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baclawski in view of Tsuchida and further in view of Avadhanam.
5. Claim 14 is objected to as being dependent upon a rejected base claim

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-11, 13 and 15-16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Srikanth Avadhanam (U.S. Patent No. 6,778,977 and Avadhanam hereinafter) in view of Carlos De La Huerga (U.S. Patent No. 6,928,452 and De La Huerga hereinafter).

Regarding Claims 1-2, 8, 11 and 13, Avadhanam discloses

producing a primary index of the data items (Abstract; see also Figure No.'s 2 and 4 and the corresponding text);

producing at least a first and a second sub-index from the primary index based on the mapping (Figure No. 8 and corresponding text; see also Col 2, Lines 40-66; see also Col 13, Lines 40-66); and

storing the at least a first and second sub-index in different search nodes (Col 2, Lines 18-25, i.e. plurality of processing units).

Avadhanam's reference discloses all of the claimed subject matter set forth above, except it does not explicitly indicate retrieving data items from a database; and mapping the data items on to at least a first tier and a second tier based on respective rankings of the data items.

However, De La Huerga teaches:

retrieving data items from a database (Col 10, Lines 10-24);

mapping the data items on to at least a first tier and a second tier based on respective rankings of the data items (Col 1, Lines 16-25; see also Col 4, Lines 58-67; see also Col 18, Lines 25-37; see also Col 20, Lines 12-17).

Given the intended broad application of the Avadhanam system, It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to

modify the teachings of Avadhanam with the teachings of De La Huerga to include a database of items (web pages) and mapping the pages to more than one tier based on ranking. Doing so would greatly advance the searching and retrieving responses time by further categorizing the list of web pages.

Regarding Claims 3 and 6-7, Avadhanam discloses static relevance score of the data items (Col 2, Lines 40-66).

Regarding Claims 4 and 5, De La Huerga discloses:
executing a search query log for a number of queries on the database (Figure No. 4 and corresponding text); and
receiving the results of the search query log (Figure No. 5, Element No. 190 and corresponding text); and
wherein the first sub-index is based on the results of the query log (Col 5, Lines 50-56; see also Col 6, Lines 32-44).

Regarding Claims 9-10 and 15-16 De La Huerga discloses searching the second tier for the result data items relating to the search query when the first tier does not yield a threshold number of result data items (Col 19, Lines 25-42).

8. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kenneth Baclawski (U.S. Patent No. 5,694,593 and Baclawski hereinafter) in view of Masashi

Tsuchida (U.S. Patent Application Publication No. 2001/0011268 and Tsuchida hereinafter) and further in view of Srikanth Avadhanam (U.S. Patent No. 6,778,977 and Avadhanam hereinafter).

Regarding Claim No. 12, Baclawski discloses:

all search nodes in any one of the columns including substantially the same information please see (Col 3, Lines 33-36; see also Col 4, Lines 8-14); and

all search nodes in any one of the rows including distinct information (Col 3, Lines 27-29; see also Col 2, Lines 8-11).

Baclawski's reference discloses all of the claimed subject matter set forth above, except it does not explicitly indicate search nodes logically arranged in a plurality of columns and plurality of rows.

However, Tsuchida teaches search nodes logically arranged in a plurality of columns and plurality of rows (Paragraphs [0057] and [0062]).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Baclawski with the teachings of Tsuchida to include the feature of logically arranged the search nodes in a plurality of columns and plurality of rows in order to increase the query processing speed, please see Tsuchida, (Abstract).

The combination of both Baclawski and Tsuchida discloses all the claimed subject matter set forth above, except they fail to explicitly indicate:

the search nodes in the rows being logically divided into at least a first and a second tier;

the search nodes in the first tier including an index for a first portion of the database; the search nodes in the second tier including an index for a second portion of the database; and

wherein the data in the first and second tier is based on respective rankings of the information in the first and second portion of the database.

However, Avadhanam discloses:

the search nodes in the rows being logically divided into at least a first and a second tier (Col 1, Lines 16-25; see also Col 4, Lines 58-67);

the search nodes in the first and second tiers including an index for a first and a second portion of the database respectively (Col 18, Lines 25-37; see also Col 20, Lines 12-17); and

wherein the data in the first and second tier is based on respective rankings of the information in the first and second portion of the database (Figure No. 8, Element No. 814 and corresponding text).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of both Baclawski and Tsuchida with the teachings of Avadhanam by dividing the nodes into first and second tiers as further indexing based on the tiers would lead to smaller search area that the search engine system needs to locate information; which in turn increases the response time of the system.

Allowable Subject Matter

9. Claim 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is the Examiner's statement of reasons for the indication of allowable subject matter:

Regarding Claim 14 Applicant's particular search engine wherein storing a first and a second sub-indexes in a first and a second plurality of search nodes respectively and wherein both the first and the second search nodes are logically arranged in a first and a second plurality of columns respectively in combination with the other limitations of the claims, was not disclosed by, would not have been obvious over, nor would have been fairly suggested by the prior art of record or that encountered in searching of the prior art, the prior art fails to anticipate or render Applicant's limitations above obvious.

Other Prior Art Made of Record

11. a. Schmuck et al. (U.S. Patent No. 6804675) discloses an online content provider system and method;

b. Judd et al. (U.S. Patent No. 6360215) discloses a method and apparatus for retrieving documents based on information other than document content;

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- c. Rubinstein et al. (U.S. Patent No. 5913215) discloses browse by prompted keyword phrases with an improved method for obtaining an initial document set; and
- d. Barrett et al. (U.S. Patent Application publication No. 20030135490) discloses enhanced popularity ranking.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

Points of Contact

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Haythim J. Alaubaidi whose telephone number is (571) 272-4014. The examiner can normally be reached on Monday - Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin, can be reached at (571) 272-446.

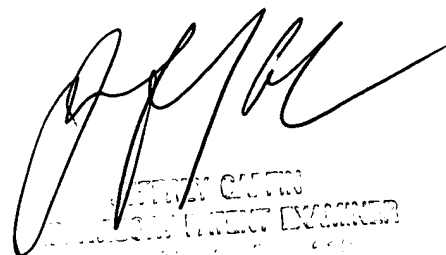
Any response to this office action should be mailed to:

The Commissioner of Patents and Trademarks, Washington, D.C. 20231 or Faxed at our central fax number (571) 273-8300.

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Hand-delivered responses should be brought to the Customer Service Window of the Randolph Building at 401 Dulany Street, Alexandria, VA 22314

Patent Examiner
Technology Center 2100
Art Unit 2168



A handwritten signature in black ink, appearing to be 'J. J. M.', is written over a rectangular stamp. The stamp contains the text 'PATENT EXAMINER' and 'TECHNOLOGY CENTER 2100' in a bold, sans-serif font. The signature is written in a cursive style, with the first and last letters of each name being capitalized and prominent.